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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,137	03/20/2002	Dan Akerfeldt	030481-0183	7034

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Glenn Law  
Foley & Lardner  
Washington Harbour  
3000 K Street NW Suite 500  
Washington, DC 20007-5143

EXAMINER

ROBERTS, PAUL A

ART UNIT PAPER NUMBER

3731

DATE MAILED: 10/10/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/018,137

Applicant(s)

AKERFELDT ET AL.

Examiner

Paul A Roberts

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 6 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9 and 10 is/are allowed.
- 6) ☒ Claim(s) 1-3, 7, 8 and 11-24 is/are rejected.
- 7) ☒ Claim(s) 4 and 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☒ Interview Summary (PTO-413) Paper No(s). 9
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 12-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The original claims and specification do not recite the following parts: “movement direction reverser”, “retractor”, “tension force”, “outer feed boom”, “inner feed boom”, and “pusher”.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 12-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The “movement direction reverser”, “retactor”, “tension force”, “outer feed boom”, “inner feed boom”, and “pusher” are not disclosed in the specification. If these items are disclosed in the specification with different names, the names in the specification are the names the applicant should use in the claims to describe those parts. If the applicant concludes that the exact names of the parts are in the specification and are labeled on the drawings, applicant

should recite the pages and line numbers of the parts in the specification to traverse this objection.

3. Claim 15 recites the limitation "said plate" in line 10. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1, 2, 3, 7, & 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erlebacher et al. US 5,350,399 in view of Sugarbaker et al. US 5,928,264.

5. Erlebacher et al. ('Erlebacher') discloses a tool for sealing a puncture. The tool comprises two mating plugs 13 and 11. The distal plug 11 is inside the lumen. Element 12 is an elongated retracting means. The Erlebacher tool also discloses a mechanism (44) coupled to the retracting means for converting a movement of the tool proximally when the distal plug is anchored to a pushing movement for moving the proximal member in a distal direction. Regarding the stretching force F1, when the proximal plug member is pushed over notch 14, there is a momentary stretching force existing between 44 and 14 along 12. The Erlebacher tool does not disclose a gear mechanism. It is well known in the art that gears are often used to transfer force from a trigger to an actuator. Sugarbaker et al. teaches this type of mechanism in figure 16. The disclosed gear mechanism is used to change the direction of force. The Erlebacher device also uses a change in direction force via recess 32. Looking at figure 16, of Sugarbaker, the figure shows gear 86 moving in one direction, with gear 78 driving in the

opposite direction, which in turn drives element 76 in the same direction. This mechanism could be used by Erlebacher to drive his tool. The advantage of using the Sugarbaker tool is to impart mechanical advantage to the tool since gear 86 is larger than gear 78. At the time of the invention it would have been obvious to substitute the gear mechanism of the Sugarbaker et al. device for the Erlebacher recess 32 because using the well known Sugarbaker et al. gear device would function equally well as the Erlebacher recess, and additionally the Sugarbaker design would impart mechanical advantage to the user of the tool.

6. Regarding claim 2, Erlebacher discloses a spring biased coupling means. Erlebacher discloses, "A spring wire 35 is also mounted in the trigger 28 to extend through the recess 32 and upwardly, as viewed, through an appropriate slot in the barrel 24 for purposes as described below. The spring wire 35 abuts against the head 33 on the stem 31 so as to transfer a pushing force on the head 33 and thus the positioner member 26 so as to push the member 26 in a direction out of the barrel 24 in order to expel the extra-arterial occluder 13 therefrom."

7. Regarding claim 3, the Erlebacher device does not constrain the wire 12 from distal movement when trigger 28 is the distal position from 25. At this position, if the device was moved away from the blood vessel, the spring bias means will release retracting means 12 to prevent lumen wall rupture.

8. Regarding claims 7, 8, and 11, figure 8 shows a picture of the distal plug. The mechanism of attaching element 12 to element 11 is not disclosed by Erlebacher. However, it would have been an obvious matter of design choice to modify the Erlebacher reference to have a hole and an enlarged section on the suture 12 since the applicant has not disclosed the hole and knot shown in figure 2 would solve any stated problem or is for any particular purpose and it

appears that the connection method shown by Erlebacher in figure 7 would perform equally well. The suture is 12 and serves as the retracting means.

***Response to Arguments***

9. Page 11, argument 1. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a device adapted to convert movement of a *wound* closing tool away from the wound) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Arguendo, a movement of the tool is experienced when the Erlebacher handle is squeezed; that proximal movement is converted to a movement of the plug in a distal manner.

10. Page 12, argument 2. The Sugarbaker reference does provide the conversion of a rotational movement into a vector movement. Since the Erlebacher reference also converts a rotational movement in the trigger to a linear movement in the plug, it would have been obvious to use the Sugarbaker gear mechanism in the Erlebacher device because the Sugarbaker device is capable of performing the necessary translation of rotational force into longitudinal force. The Sugarbaker reference may or may not recite the movement of one vector into an opposite vector movement, but this reference was not cited to add that feature into Erlebacher. However, figure 16 clearly enables this feature. Additionally, Erlebacher also discloses this feature because the handle provides one vectorial movement, which in turn moves the plug in the opposite vectorial direction.

Page 13, argument 3. The applicant argues that the enlarged portion and through-bore is not disclosed by Erlebacher. Applicant's arguments with respect to claim 7 have been considered but are moot in view of the new ground(s) of rejection.

11. Page 14, argument 4. Applicant is challenging the motivation to combine the Erlebacher and Sugarbaker devices. The Erlebacher reference alone discloses the change in vectorial direction. This could easily be done with a gear mechanism, but Erlebacher did not design his tool to use one. Looking at figure 16, of Sugarbaker, the figure shows gear 86 moving in one direction, with gear 78 turning in the opposite direction, which in turn drives element 76 in the same direction as element 78. This mechanism could be used by Erlebacher to drive his tool, and shows the change in vectorial direction. The advantage of using the Sugarbaker tool is to impart mechanical advantage to the tool since gear 86 is larger than gear 78. The principle mode of operation would not be changed if this mechanism were to be placed into the Erlebacher reference.

12. Page 14, argument 5. Claim 11, which is not allowable because the elements of claim 11 are anticipated by Erlebacher, was omitted by accident by the examiner but should have been included in the rejection of claims 7 and 8. Claim 11 is rejected in this application.

### ***Conclusion***

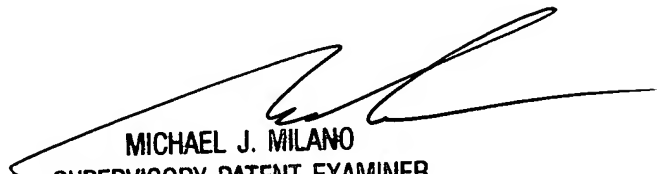
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul A Roberts whose telephone number is (703) 305-7558. The examiner can normally be reached on 7:30-4:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J Milano can be reached on 703-308-2496. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.

Paul Roberts  
Paul.Roberts@uspto.gov  
24/09/03



MICHAEL J. MILANO  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700